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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,695	08/23/2001	Stefan Boneberg	1748X/50331	8405

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CROWELL & MORING, L. L. P.  
P.O. Box 14300  
Washington, DC 20044-4300

EXAMINER
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DUONG, THANH P

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/934,695

Applicant(s)

BONEBERG ET AL.

Examiner

Tom P. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

Applicants' remarks and amendments filed on January 12, 2006 have been carefully considered. Claim 5 has been amended. Claims 5-9 are pending in this application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 5 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fowler (4,115,467). Regarding claim 5, Fowler discloses a gas-generation device generating (Fig. 1) a hydrogen-rich gas from at least one of partial oxidation (43) of an oxygen/fuel mixture (via lines 44 and 45) or catalytic steam reforming of water/fuel mixture (32), comprising: a partial oxidation reactor (43) by which a product gas is generated (via line 48); an adiabatic, catalytic after-treatment stage (38), downstream (connected via line 48) of the partial oxidation reactor (43), by which produces a product gas with a minimized oxygen content from the product gas generated by the partial oxidation reactor (43); and steam reformer (32) downstream (connected via lines 5, 4, 17, 10, and 11) of the after treatment stage (38) to which the product gas with minimum

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oxygen content is fed from the after treatment stage (38). Regarding claim 8, Fowler discloses water or steam (via line 22) is added to the steam reformer (32). Regarding claim 9, Fowler shows on Fig.1 that the catalytic after-treatment (38) is integrated between the partial oxidation (43) and the steam reformer (32). Note, limitations directed to the manner of operating the gas generating device and/or material or article worked upon do not further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP 2114 and 2115. Further, the process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are no significance in determining patentability of the apparatus claim."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler '467 in view of Strobel et al. (6,620,536). Regarding claims 6-7, Fowler '467 discloses a shift reaction stage 38 but fails to disclose a precious metal-containing catalyst on a catalyst support having low heat capacity. Strobel '536 teaches the

catalytic after-treatment stage (2) comprises a precious metal containing catalyst of platinum (Col. 3, lines 16-20) and the catalyst is being supported by zeolite or alumina, which has a low heat capacity. Such catalyst converts or reduces the carbon monoxide concentration. Thus, it would have been obvious in view of Strobel to one having ordinary skill in the art to modify the gas generation system of Fowler '467 with an after-treatment catalyst on a catalyst support as taught by Strobel in order to facilitate the conversion of carbon monoxide to carbon dioxide and/or to reduce the concentration of carbon monoxide.

### ***Response to Arguments***

Applicants' arguments filed January 12, 2006 have been fully considered but they are not persuasive. Applicants argued the Fowler reference fail to disclose "steam reformer 32 receives a product gas with a minimized oxygen content produced by an adiabatic, catalytic after treatment stage". It is submitted that the Fowler discloses all structural limitations of the claimed invention and the gas-generating device of Fowler is capable produce a product gas with minimized oxygen content. Note, limitations directed to the manner of operating the gas generating device and/or material or article worked upon do not further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP 2114 and 2115. Further, the process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to

contents thereof and to an intended operation are no significance in determining patentability of the apparatus claim."

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong  
March 21, 2006

TD

  
Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700